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REMARKS

The Examiner rejected claims 1-5, 10, 19 under 35 U.S.C. 103(a) as being unpatentable over Tanabe in view of Shul. Applicant traverses this rejection.

With respect to Claim 1, the Examiner looks to Tanabe as teaching all of the limitations of the claim except the limitation that BCl_3 is present in said reactor at a concentration of about 5 percent to about 75 percent by volume. The Examiner looks to Shul as teaching an etching system having the two gases in question in which BCl_3 is present in the input gas in the claimed concentration. The Examiner admits that Shul does not teach the concentration of the gases in the reactor itself, but rather the concentration of the gas in the input flow to the reactor. The Examiner attempts to overcome this problem by stating that the claim language of "a concentration of about 5 percent to about 75 percent by volume" of the gas in the reactor can be interpreted as the flow rate of the gas in the reactor. Applicant disagrees. The Examiner is not free to alter the claim language to match the art cited by the Examiner. Furthermore, it is well known in the art that the reaction vessel has a vacuum pump that removes gas from the reactor while the reaction is taking place. It is also well known that components of the etching gas are consumed at different rates in the reactor. Hence, one cannot determine the concentration of the gases in the reactor without knowing the rate of consumption of the various gases. Alternatively, one could look at the concentration of the gases removed from the reactor by the vacuum system. Since the art cited by the Examiner does not teach either of these concentrations, Applicant submits that the Examiner has not made a *primia facia* case for obviousness with respect to Claim 1 or the claims dependent therefrom.

With respect to Claim 19, the Examiner argues that it would be obvious to replace the HI taught as the first gas in Tanabe with a gas from group VII because Shul teaches an etching system that includes such a gas with BIC_3 in a 5 gas etching system. As noted above, the combined teachings, even if one accepts the Examiner's substitution, do not teach the concentration limitation in the reactor, since only the input flow rates are given. In addition, the Examiner has not pointed to any teaching in the art that would cause someone of ordinary skill to substitute the Cl_2 taught in Shul for the HI taught in Tanabe. Hence, Applicant

submits that the Examiner has not made a *primia facia* case for obviousness with respect to Claim 19.

The Examiner rejected Claim 20 under 35 U.S.C. 103(a) as being unpatentable over Shul in view of Demmin. Applicant traverses this rejection.

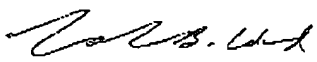
In making this rejection, the Examiner admits that Shul does not teach the claimed gas ratio. The Examiner looks to Demmin as teaching that gas flow rates can be varied to optimize a similar etchant system, and hence, he claims that the claim limitation is merely finding an optimum range that involves only routine skill in the art.

As noted above, Shul teaches that the results are highly dependent on a large number of factors including the gas flow rates, temperature, specific substrates, etc. Hence, there are an overwhelming number of variables, and combinations thereof, to optimize. Absent the teachings of the present application, one of ordinary skill would not arrive at the claimed combination without undue experimentation. Hence, Applicant submits that the Examiner has not made a *primia facia* case for obviousness with respect to Claim 20.

The Examiner indicated that Claims 8 and 9 would be allowable if Claim 8 was placed in independent form. The above amendments place Claim 8 in independent form.

I hereby certify that this paper is being sent by FAX to 571-273-8300.

Respectfully Submitted,



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